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Imaging of Monosterous Craniopharyngioma: A Pictorial Essay

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Craniopharyngioma is usually a mixed solid and cystic suprasellar tumor which derives from Rathke's pouch. It usually occurs in children and adults in the fourth and fifth decades of life. The tumors are histologically benign and slow growing but focal invasion and peritumoral fibrosis leads to high tumoral recurrence after surgery.

We had 11 patients admitted with different symptoms such as headache, nausea, vomiting and visual loss.

Extensive craniopharyngioma was proved after surgery in them. In some patients, primary imaging studies are reviewed. In others who presented with new onset symptoms several years after surgery brain CTscan and MRI studies were performed. On brain CT scan of most cases we can see a mixed cystic and solid suprasellar mass with calcifications in both solid and cystic parts. In this article, we present some cases of craniopharyngioma with interesting extensions and invasion to adjacent brain structures.

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Evaluation of the Degree of Educational Goal Fulfillment of Theoretical Courses in Technology for Radiology Students in Hamadan University of Medical Sciences

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Background/Objective: Evaluation of educational programs is very important in the process of programming. Evaluation is a comparison between educational results and predetermined goals in order to make decision about programs. Via evaluation, one can judge about programs and of course can correct or change them if necessary.

Materials and Methods: In this study, the degree of

fulfillment of educational goals for radiology students in technology has been evaluated from 1385 to 1386 by distributing questionnaires among these students. The relationship between fulfillment of educational goals and scores of students in different semesters were evaluated by statistical analysis.

Results: About 24%, 96% and 100% of students of semester 1, 2 and 3 completely answered the questions and the others were excluded from the study. About 79.3% of the first semester students of radiology assessed a medium fulfillment of educational goals, but in one case, public health lesson, most of them (64%) believed in low fulfillment of goals. Second semester students of radiology, as the same ratio, assessed the fulfillment of goals as high, medium and low. Most of the third semester students (60.3%) believed that the fulfillment of educational goals had been medium. Most of students believed that the degree of fulfillment of educational goals of courses taught by professors who were not members of the school was higher. There was no statistically significant relation between the fulfillment of educational goals and the score of students in related lessons.

Conclusion: The study revealed that the degree of fulfillment of educational goals for students in different semesters of Radiology was different. There were significant differences between fulfillment of educational goals in theoretical courses conducted by groups inside and outside the paramedical school.

Keywords: Educational Planning, Vocational Education, Evaluation, Technology, Radiology Students

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The Accuracy of High Resolution Ultrasound Imaging for Detection of Secondary Hyperparathyroidism in Hemodialysis Patients

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Background/Objective: Ultrasound is one of the preferred modalities for the evaluation of parathyroid glands. This study was undertaken to determine the accuracy of high resolution ultrasound for secondary hyperparathyroidism in patients with chronic renal failure.

Patients and Methods: From March 2008 to March 2009, 91 hemodialysis patients were examined by high-resolution ultrasound (14 MHz) of the parathyroid glands in comparison to parathyroid hormone level.

Results: In 40/91 (43.9%) patients, sonography showed enlarged parathyroid glands with an average of 8.7 mm. The mean parathyroid hormone level of patients with enlarged parathyroid glands on sonography was 503 ± 450.031 pg/ml. We revealed a significant difference between the parathyroid hormone level and enlarged parathyroid glands ($p=0.0001$). Sensitivity and specificity of sonography for the detection of secondary hyperparathyroidism were 62.5% and 85.7%, respectively.

Conclusion: This study showed that high-resolution sonography is a useful noninvasive method for the evaluation of secondary hyperparathyroidism in patients on hemodialysis and that sonographically enlarged glands may be a measure of the severity of secondary hyperparathyroidism.

Keywords: High Resolution Ultrasound, Secondary Hyperparathyroidism, Chronic Renal Failure, Hemodialysis

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Haematological Profile Change in Radiation Field Workers

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Objectives: This study focuses on the haematological parameters change and age in radiation field workers. The study aimed to identify the affect of radiation on haematological parameters and their relation to age and duration of the experience in radiation field workers.

Patients and Methods: This study was conducted in the Physiology Research Center in collaboration with the Thalassemia and Haemoglobinopathies Center, Ahwaz Jondishapour University of Medical Sciences

(AJUMS), Ahwaz, Iran during the year of 2008. In this study, a group of 60 male occupationally exposed radio-therapeutic and diagnostic workers in the age range of 25-48 with an average of 14 years work experience were recruited. They were matched with a group of 60 healthy control subjects in the same range of age, gender and ethnic origin. Both groups met with exclusion criteria as per standard. Haematological parameters were observed using a blood cell auto analyzer.

Results: The platelet and white blood cell counts were decreased in radiation field workers with an increased duration of exposure. Radiation field workers showed a statistically significant decrease ($p<0.01$, $p<0.05$) in the mean values of platelet and white blood cell counts, respectively when compared to controls. However, no significant difference was observed in the rest of hematological parameters between the groups.

Conclusion: The present study suggests that radiation field workers should regularly get periodic medical surveillance including hematological profile with focus on white blood cells and platelets. These measures would help to decrease the effects of occupational hazards of radiation and detect the disease in initial stage when treatment is achievable in the workers.

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The Accuracy of Ultrasonography Technique in the Detection of Intussusception

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Background/Objective: Ultrasonography is an important tool in the screening and diagnosis of patients with suspected intussusception. This study was conducted to retrospectively evaluate the accuracy and performance of ultrasonography in the detection of intussusception as well as to prevent unnecessary surgery.